

### **C. REMARKS**

Applicants respectfully request reconsideration of the outstanding rejections and reexamination of the present application in light of the following amendments and remarks.

#### ***Status of the Claims & Statement Regarding Claim Amendments and Cancellations***

Claims 1, 5, 6, and 11 are currently pending in the application. Claims 2-4, 7-10, and 12-34 are currently canceled. Claims 1 and 5 are currently amended.

In this Amendment, Applicants have amended claims 1 and 5 and canceled claims 2-4, 7-10, and 12-34 from further consideration in this application. Applicant is not conceding that the subject matter encompassed by claims 1-34 prior to this Amendment is not patentable over the art cited by the Examiner. Claims 1 and 5 were amended and claims 2-4, 7-10, and 12-34 were cancelled in this Amendment solely to facilitate expeditious prosecution of allowable subject matter. Applicant respectfully reserves the right to pursue claims, including the subject matter encompassed by claims 1-34, as presented prior to this Amendment and additional claims in one or more continuing applications.

#### ***Claim Rejections – 35 USC 101***

The Office Action rejects claims 12-21 and 22-28 under 35 USC 101. [Office Action, p. 2] Applicants have canceled claims 12-21 and 22-28 from further consideration in the present application, therefore the rejection under 35 USC 101 is not applicable to the pending claims.

#### ***Pending Claims are not Anticipated or Obvious under the cited Prior Art***

The Office Action rejects claims 1-2, 6-7, 11-13, 17, 21-23, 27, and 29 under 35 USC 102(e) as being anticipated by Mei et al. (US Patent 6,816,907) (herein referred to as Mei). [Office Action, p. 3] In addition, the Office Action rejects claims 3-5, 8-10, 14-

16, 18-20, 24-26, 28, and 30-34 under 35 USC 103(a) as being unpatentable over Mie in view of Sankaranaryan et al. (US Patent 6,799,208) (herein referred to as Sankaranaryan). Claims 2-4, 7-10, and 12-34 are canceled from consideration in the present application, therefore the rejection of these claims is not applicable.

As to claims 1, 5, 6, and 11, Applicants respectfully traverse the rejection of these claims.

*Claim 1*

As to claim 1, the claim currently reads:

Claim 1 (Currently Amended): A method for maintaining application operations within a suboptimal grid environment, comprising:

enabling a grid environment comprising a plurality of computing systems each comprising at least one resource and communicatively connected over a network through a grid management system to share each said at least one resource through at least one web service layer atop at least one grid service layer implemented within an open grid services architecture;

receiving a plurality of separate jobs from a plurality of client systems over said network at said grid management system;

managing distribution from said grid management system of each of said plurality of separate jobs to a separate selection of said at least one resource;

submitting by said grid management system an application from among a plurality of applications to at least one resource node comprising at least one of said at least one resource from among a plurality of resource nodes comprising at least one of said at least one resource within [a] said grid environment, wherein each of said plurality of separate jobs requests at least one of said plurality of applications;

monitoring by said grid management system a performance status of said at least one resource node;

comparing by said grid management system said performance status with an operational requirement specified in a profile for said application for when said application is operating at said at least one resource node; [[and]]

responsive to said performance status not meeting said operational requirement,

determining by said grid management system whether there is at least one other resource node from among said plurality of resource nodes within said grid environment that meets said operational

requirement specified in said profile for said application for when said application is operating at said at least one other resource node;

responsive to determining there is said at least one other resource node that meets said operational requirement specified in said profile, relocating by said grid management system said application to said at least one other resource node within said grid environment;

responsive to determining there is not said at least one other resource node that meets said operational requirements specified in said profile, determining by said grid management system from said profile at least one module to first shutdown from among a plurality of modules of said application defined in said profile, wherein each of said plurality of modules is assigned a separate resource size requirement and a separate priority to be shut down in said profile;

responsive to determining from said profile said at least one module to first shutdown, sending an XML message by said grid management system to said at least one resource node authorizing said at least one resource node to shutdown said at least one module, such that said application continues to operate with a portion of said plurality of modules when said performance status fails to meet said operational requirement in said profile, adjusting use by said application of said at least one resource node, such that said application continues to operate when suboptimal conditions arise in a grid environment.—

First, Applicants respectfully assert that no new matter is added through the amendments to the claims. The specification of the present application teaches the amended elements within enabling a grid environment comprising a plurality of computing systems each comprising at least one resource and communicatively connected over a network through a grid management system to share each said at least one resource through at least one web service layer atop at least one grid service layer implemented within an open grid services architecture, throughout and for example, in paragraphs 0040, 0041, 0042, 0045, 0049, and 0050. The specification of the present application teaches the amended elements within receiving a plurality of separate jobs from a plurality of client systems over said network at said grid management system throughout, and for example, in paragraphs 0042 and 0044. The specification of the present application teaches the amended elements within managing distribution from said grid management system of each of said plurality of separate jobs to a separate selection of said at least one resource throughout, and for example, in

paragraphs 0044 and 0067. The specification of the present application teaches the amended elements within submitting by said grid management system an application from among a plurality of applications to at least one resource node comprising at least one of said at least one resource from among a plurality of resource nodes comprising at least one of said at least one resource within [[a]] said grid environment, wherein each of said plurality of separate jobs requests at least one of said plurality of applications throughout and for example, in paragraphs 0067 and 0070. The specification of the present application teaches the amended elements within comparing by said grid management system said performance status with an operational requirement specified in a profile for said application for when said application is operating at said at least one resource node throughout, and for example, in paragraph 0074. The specification of the present application teaches the amended elements within responsive to said performance status not meeting said operational requirement, determining by said grid management system whether there is at least one other resource node from among said plurality of resource nodes within said grid environment that meets said operational requirement specified in said profile for said application for when said application is operating at said at least one other resource node and responsive to determining there is said at least one other resource node that meets said operational requirement specified in said profile, relocating by said grid management system said application to said at least one other resource node within said grid environment throughout, and for example, in claim 2 as originally filed and paragraphs 0075 and 0078. The specification of the present application teaches the amended elements within responsive to determining there is not said at least one other resource node that meets said operational requirements specified in said profile, determining by said grid management system from said profile at least one module to first shutdown from among a plurality of modules of said application defined in said profile, wherein each of said plurality of modules is assigned a separate resource size requirement and a separate priority to be shut down in said profile throughout, and for example, in claims 3 and 4 as originally filed and in paragraphs 0075, 0079, 0080, and 0083. In addition,

the specification of the present application teaches the amended elements within responsive to determining from said profile said at least one module to first shutdown, sending an XML message by said grid management system to said at least one resource node authorizing said at least one resource node to shutdown said at least one module, such that said application continues to operate with a portion of said plurality of modules when said performance status fails to meet said operational requirement in said profile, throughout, and for example, in claim 3 and paragraphs 0080 and 0084.

In view of the supportive teachings for each of the claimed elements, Applicants respectfully request entry and allowance of the pending claims.

Second, Applicants respectfully assert that Mei does not anticipate claim 1 as currently amended. In particular, regardless of whether the Examiner's assertions in the Office Action are correct, claim 1 is amended to clearly teach a grid management system for (1) submitting a job requesting at least one application into a virtual organization of grid resources shared through a web service layer atop a grid service layer implemented within an open grid services architecture and the grid management system for (2) submitting an application to at least one resource node and if performance within the resource node is suboptimal for that application, managing relocation of the application to at least one other resource node or shutdown of one or more modules of the application. Claim 1 is not anticipated by Mei because claim 1 clearly teaches a grid environment comprising multiple resources communicatively connected through a grid management system to share the resources through a web services layer atop a grid service layer implemented within an open grid services architecture and because claim 1 clearly teaches the grid management system for managing distribution of job requests to resources and submission of applications to resource nodes, in addition to monitoring the performance conditions of the application and relocating the application or ordering particular modules of the application to be shut down if suboptimal conditions are present. Because Mei does not anticipate the

amended elements of claim 1, Applicants respectfully request withdrawal of the rejection of claim 1 and allowance of the claims.

In addition, Applicants respectfully assert that claim 1 as amended to incorporate elements from originally submitted dependent claims 3 and 4 is not obvious under Mei in view of Sankaranaryan. In particular, Applicants note that the Office Action cites col. 14, lines 10-41 of Sankaranaryan as reading on the previously claims elements of claims 3 and 4 of “identifying a first module of said application to shutdown”, “sending a message to said at least one resource node to shutdown said first module”, and “searching an application profile for said application to identify said first module, wherein said application profile defines said first module and prioritizes said first module.” [Office Action, pp. 6, 7] Applicants submit that regardless of whether the Examiner’s assertions in the Office Action are correct, claim 1 is amended to incorporate elements previously taught in claims 3 and 4, but also amended to clarify that the module being shut down is one of a plurality of modules of an application requested by a grid job, where the application’s profile specifies required operating conditions and specifies which modules to shutdown, so that the application can continue to operate without being completely shut down when suboptimal conditions exist.

In addition, in performing a Graham analysis, Applicants note that Sankaranaryan, when viewed as a whole, describes assigning different priorities to different users and to the activities requested by different users and giving a resource manager the right to preempt the lower priority activity of certain users using certain resources and shift the resources to higher priority activity of other users. *Sankaranaryan*, col. 14, lines 10-41. No portion of Sankaranaryan teaches or suggests shutting down some, but not all, of the modules of an application or a profile for an application itself which specifies the priority of different modules in the application so that when suboptimal conditions are present, one or more modules can be shutdown without shutting down the entire application.

Thus, in performing a second step of a Graham analysis, regardless of whether the previous assertions were correct, the difference between claim 1 and Mei and

Sankaranaryan now is that Sankaranaryan merely describes prioritizing user activity, but claim 1 teaches an application profile that specifies a prioritization of modules that can be shutdown without shutting down the entire application when suboptimal conditions for the application are detected.

In view of the gap between the teachings of the prior art and claim 1 as amended, there is no rationale for one of ordinary skill in the art to find claim 1 as a whole obvious in view of the differences between Mei and Sankaranaryan and claim 11.

Therefore, in view of the foregoing, Applicants respectfully request withdrawal of the rejection of claim 1 and allowance of the claim.

*Claims 5, 6, and 11*

Applicants respectfully assert that because claim 1 is not anticipated under 35 USC 102(e) or obvious under 35 USC 103(a) in view of the prior art, claims 5, 6, and 11 which depend on claim 1 are also nonobvious and should be allowed. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

In addition, Applicants note that claim 5 is amended to maintain antecedent basis in view of the amendments to claim 1. In addition, paragraphs 0080, 0083, and 0085 of the present application support the teachings in each of the amended elements of claim 5, such that no new matter is added through the amendments to the claim.

***Additional Information which may be Material to Patentability***

Applicants respectfully direct the Examiner's attention to several matters regarding information which may be material to patentability in the present application.

Applicants note that the present application cites an application which is co-pending with the present application, which is incorporated by reference into the present application. As noted in the amendments to the specification, Applicants clarify that this applications to which the present application is cross-referenced, include US Patent Application Serial No. 10/757,270. Applicants note that under the new rule promulgated under 37 CFR 1.78(f)(1), but not yet enforced, the Office requires that all related

applications should be listed, where related applications are defined as applications which have a filing date that is the same or within 2 months of the filing date of the present application taking into account benefit filing dates, share at least one common inventor, and share a common assignee. Applicants note that in the spirit of the recently promulgated rules under 37 CFR 1.78(f)(1), Patent Application serial nos. 10/756,138 and 10/756,134 may also be considered related applications that are co-pending with the present application, and Applicants therefore fulfill the duty of candor and good faith in dealing with the Office to disclose information with Applicants' knowledge as to other co-pending application, including material rejections in co-pending applications, as described in 37 CFR 1.56 and recently clarified in *McKesson Information Solutions, Inc. v. Bridge Medical, Inc.*, 487 F.3d 897, 82 USPQ2d 1865 (May 18, 2007).

Applicants received an Office Action in 10/757,270 from Examiner Djenane M. Bayard, dated 01/24/2008. In addition, Applicants received an Office Action in 10/756,138 from Examiner Meng Yao Zhe, dated 10/31/2007 and Applicants filed a response to this action, dated 01/31/08. Applicants received an Office Action in 10/756,138 from Examiner Tariq Najee-Ullah dated 09/27/07, and Applicants filed a response to this action, dated 02/27/08.



***Conclusion***

Applicants note the citation of pertinent prior art cited by the Examiner.

In view of the foregoing, withdrawal of the rejections and the allowance of the current pending claims is respectfully requested. If the Examiner feels that the pending claims could be allowed with minor changes, the Examiner is invited to telephone the undersigned to discuss an Examiner's Amendment.

No extension of time is believed to be necessary. If, however, an extension of time is required, the undersigned hereby authorizes the Commissioner to charge any fees for this extension to IBM Corporation Deposit Account No. 09-0447.

Respectfully submitted,

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